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Wet cell inspection of contact lenses

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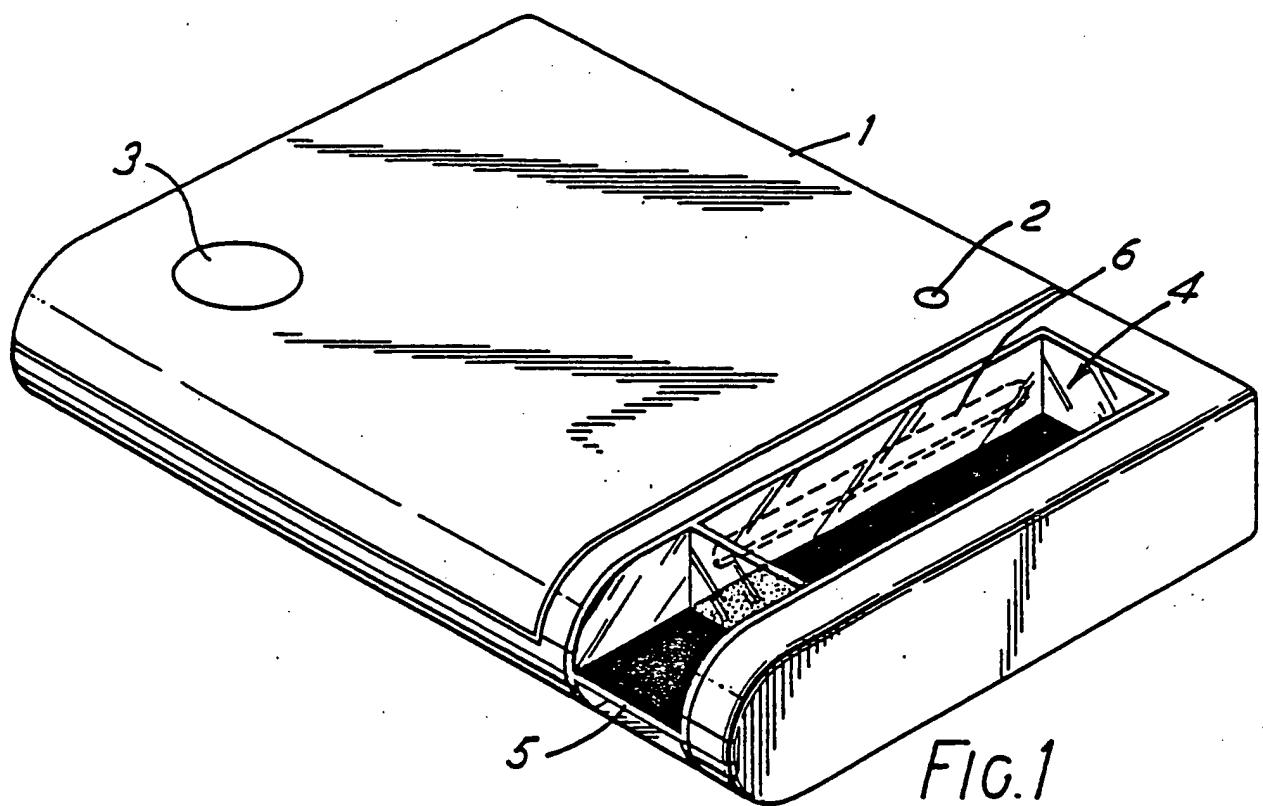


FIG.1

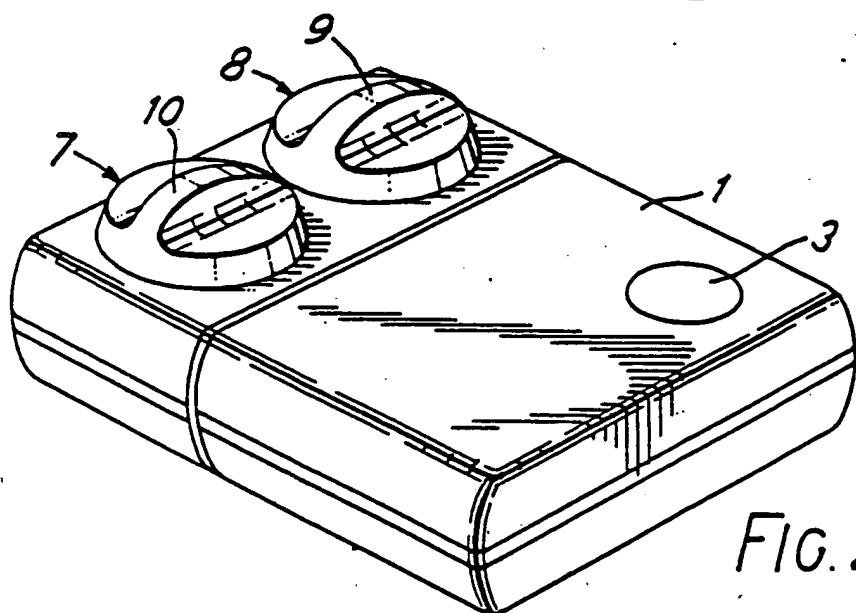


FIG.2

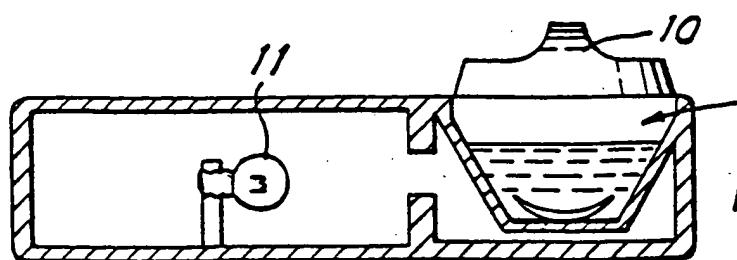


FIG.3

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"WET CELL INSPECTION OF CONTACT LENSES"

This invention relates to a device designed for inspecting contact lenses, and in particular for showing their material condition.

5 Contact lenses are optical devices worn on the cornea primarily to correct optical errors of the human eye. In order to perform optically and physiologically in the eye they must be optically transparent, free from any discolouration or contamination and conform to certain specified 10 parameters. Contact lens inspection devices currently on the market are designed primarily to confirm parameter specifications.

15 The device of the present invention is designed solely to demonstrate optical transparency and freedom from discolouration or contamination in contact lenses. Use is made of the scattering effect of transversely projected light by contaminants in the lens whilst submerged in a suitable storage fluid, the lens being viewed against an appropriate coloured 20 background.

25 According to the invention there is provided a device for the inspection of contact lenses, the device comprising a housing; a light source in the housing; one or more wet cells in the housing for holding liquid in which contact lenses can be 30 immersed, and one or more light-emitting apertures for allowing light to travel from the light source to provide transverse illumination for lenses in the or each wet cell, the lenses being viewable from above against a suitable back-ground. Discolouration and contamination in the contact lens are thereby demonstrated. The device may be either produced in pocket-size dimensions and battery pow r d or as a larger model and mains operated. The wet cell may 35 incorporate light or dark viewing backgrounds. A push button on/off switch prevents the device being

accidentally left on. The mains operated model may feature a removable wet cell and the battery powered model may incorporate a non-removable wet cell with left and right compartments with screw lids, which enables the device to be used as a carrying storage case.

Specific embodiments of the invention will now be described by way of example by reference to the accompanying drawings of which:

Figure 1 is a perspective view of a device in accordance with the invention;

Figure 2 is a perspective view of another device in accordance with the invention; and

Figure 3 is a cross-sectional view of the device of Figure 2.

Referring to Figure 1 the device comprises a housing 1 which stands on a pedestal not visible in the drawing. The device is mains powered, having a mains lamp inside and a neon indicator lamp 2. A push-button switch 3 switches the mains lamp on and off.

A wet cell 4 is provided in the form of a tray which may be gripped at 5 and withdrawn by being slid out. An indent in the base of the tray registers with a detent upstanding from the housing to locate the tray in the inserted position.

The tray has transparent sides and a dark base. In use it is filled with liquid, typically water, and the lenses to be inspected are submerged. The mains lamp is switched on and light emerges from a slit 6 to illuminate the lenses transversely. When viewed from above against the dark background of the base of the tray, defects and blemishes can be seen.

Figures 2 and 3 show another embodiment of the invention. Here the device is battery operated. The housing 1 has a push-button 3 for switching the lamp on and off. There are two wet cells at 7 and 8

and they are not removable. The wet cells are intended to hold a respective lens of a pair in a storage solution and a protective screw cover 9, 10 is provided.

Figure 3 shows the lamp at 11 and shows that
5 the wet cells are cup-shaped depressions which are transparent-sided. Each has a dark base so that the lenses can be observed in transverse light from the lamp in the same manner as described with reference to Figure 1.

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CLAIMS

1. A device for the inspection of contact lenses, the device comprising a housing; a light source in the housing; one or more wet cells in the housing for holding liquid in which contact lenses can be immersed, and one or more light-emitting apertures for allowing light to travel from the light source to provide transverse illumination for lenses in the or each wet cell, the lenses being viewable from above against a suitable back-ground.
- 5 2. A device as claimed in claim 1 wherein the or each wet cell is a removable tray.
- 10 3. A device as claimed in claim 2 wherein there is a single wet-cell tray which is slidable in the housing.
- 15 4. A device as claimed in claim 3 wherein a detent is upstanding from the housing and an indent is provided in the base of the tray to locate with the detent and hold the tray in the inserted position.
- 20 5. A device as claimed in claim 1 wherein there is provided a pair of trays, one for each of a pair of lenses, and the device acts also as a storage container, protective covers being provided for the trays.
- 25 6. A device for inspecting contact lenses substantially as hereinbefore described with reference to Figure 1 or Figures 2 and 3 of the accompanying drawings.

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